This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-10. (Canceled)

11. (Previously presented) A method for caching a content element, comprising:

receiving a content element insertion request;

computing a navigation probability data field for a cacheline in which said content element is to be stored, where said computing accounts for a maximum navigation probability (MNP) of said cacheline, and wherein said MNP is defined as a maximum probability from a plurality of probabilities, wherein the plurality of probabilities comprises each probability for each other cacheline that a user will request said content element from a content element stored ~~one or more~~ the other cacheline[[s]], and wherein ~~said plurality of probabilities are~~ each probability is determined using a quantity of predecessors for ~~said other~~ the corresponding cacheline[[s]]; and

associating the content element with a content element node and storing the content element and the content element node in a component cache, said content element node comprising said navigation probability data field.

12. (Previously presented) The method of Claim 11, wherein the content element node further comprises a node identifier (NodeID) data field, timestamp data field, a content component, and a next node data component comprising node identifiers for all nodes that are reachable in a single step from a current node.

13. (Previously presented) The method of Claim 11, further comprising determining that the content element should not reside in the component cache.

14. (Previously presented) The method of Claim 13, wherein said determining that the content element should not reside in the component cache comprises determining whether a second content element should replace the content element.

15. (Previously presented) The method of Claim 13, wherein said determining that the content element should not reside in the component cache comprises determining how recently the content element has been referenced.

16. (Previously presented) The method of Claim 13, wherein said determining that the content element should not reside in the component cache comprises determining the likelihood that the content element will be needed.

17-31. (Canceled)

32. (Currently Amended) A system for caching a content element, comprising:

 a processor;

 a software component configured to receive a content element insertion request;

 a software component configured to compute a navigation probability data field for a cacheline in which said content element is to be stored, where said computing accounts for a maximum navigation probability (MNP) of said cacheline, and wherein said MNP is defined as a maximum probability from a plurality of probabilities that a user will request said content element from a content element stored in one or more other cachelines, and wherein said plurality of probabilities are determined using a quantity of predecessors for said other cachelines; and

 a software component configured to ~~compute~~ associate the content element with a content element node and storing the content element and the content element node in a component cache, said content element node comprising said navigation probability data field.

33. (Previously presented) The system of Claim 32, wherein the content element node further comprises a node identifier (NodeID) data field, timestamp data field, a content component, and a next node data component comprising node identifiers for all nodes that are reachable in a single step from a current node.

34. (Previously presented) The system of Claim 32, further comprising a component configured to determine that the content element should not reside in the component cache.

35. (Previously presented) The system of Claim 34, wherein said component configured to determine that the content element should not reside in the component cache also determines whether a second content element should replace the content element.

36. (Previously presented) The system of Claim 34, wherein said component configured to determine that the content element should not reside in the component cache also determines how recently the content element has been referenced.

37. (Previously presented) The system of Claim 34, wherein said component configured to determine that the content element should not reside in the component cache also determines the likelihood that the content element will be needed.

38-39. (Canceled)

40. (Previously presented) A computer readable medium having stored thereon computer executable instructions for caching a content element, said computer executable instructions comprising instructions for:

receiving a content element insertion request;

computing a navigation probability data field for a cacheline in which said content element is to be stored, where said computing accounts for a maximum navigation probability (MNP) of said cacheline, and wherein said MNP is defined as a maximum probability from a plurality of probabilities that a user will request said content element from a content element stored in one or more other cachelines, and wherein said plurality of probabilities are determined using a quantity of predecessors for said other cachelines; and

associating the content element with a content element node and storing the content element and the content element node in a component cache, said content element node comprising said navigation probability data field.

41. (Previously presented) The computer readable medium of Claim 40, wherein the content element node further comprises a node identifier (NodeID) data field, timestamp data field, a content component, and a next node data component comprising node identifiers for all nodes that are reachable in a single step from a current node.

42. (Previously presented) The computer readable medium of Claim 40, further comprising instructions for determining that the content element should not reside in the component cache.

43. (Previously presented) The computer readable medium of Claim 42, wherein said instructions for determining that the content element should not reside in the component cache comprise instructions for determining whether a second content element should replace the content element.

44. (Previously presented) The computer readable medium of Claim 42, wherein said instructions for determining that the content element should not reside in the component cache comprise instructions for determining how recently the content element has been referenced.

45. (Previously presented) The computer readable medium of Claim 42, wherein said instructions for determining that the content element should not reside in the component cache comprise instructions for determining the likelihood that the content element will be needed.

46-47. (Canceled)